

## INTERACTIVE TOY SYSTEM

The present patent application is based on and claims priority from United States  
5 Provisional Patent Application, Serial Number 60/292,747 filed on May 21, 2001.

The present invention relates generally to interactive toy systems

In particular, the present invention relates to novel systems for assisting with  
communications between children and a remotely-disposed operator.

### Description of the Prior Art

The prior art is exemplified by the following United States patents.

Refabert United States Patent 3,274,729;

Tomaro United States Patent 3,458,950;

Tomaro United States Patent 3,538,639;

Ho United States Patent 4,579,540;

Rose United States Patent 4,840,602; and

Sato et al. United States Patent 4,850,930.

None of the conventional devices and techniques disclose or contemplate a novel  
and unique interactive toy system which permits remote two-way communication between  
a child and a remotely-positioned person and which has the novel features of the present  
20 invention.

Indeed, a desideratum of the present invention is to avoid the animadversions of the  
conventional devices and techniques.

It would thus be desirable to provide a simple system which, in addition to eliminating or avoiding the problems and disadvantages attendant to the conventional systems, devices and techniques, provides very new and desirable features, heretofore unattained.

5 It is a further desideratum of the present invention to avoid the animadversions of the previous techniques, devices, and mechanisms as described in the relevant art mentioned hereinabove

### **Summary of the Invention**

The present invention provides a unique interactive toy system, comprising: a toy; first means remote from said toy for transmitting first electronic signals carrying first audio input from a first living being to said toy, for receiving second electronic signals carrying second audio input from a second living being transmitted from said toy, and for deriving from said second electronic signals said second audio input; and said toy including second means for transmitting said second electronic signals carrying said second audio signals from said second living being to said first living being, for receiving said first electronic signals carrying said first audio input from said first living being, and for deriving from said first electronic signals said first audio input.

The present invention may also provide a novel interactive toy system as described hereinabove which optionally also includes voice modulating means operably connected  
20 with said first means.

The present invention preferably, but not necessarily, may also provide a novel interactive toy system as described hereinabove which also includes means for moving at least one predetermined part of said toy, such as, for example, the mouth and/or eyes of

said toy, substantially in synchronism with said first audio input.

The present invention provides a new and useful interactive toy system which enables an adult and a child to conveniently and remotely play and/or communicate with each other.

5           The present invention provides novel system for talking to children through the medium of a toy, such as a stuffed animal.

It is an object of the present invention to enable a child to enjoy the apparent attention of a stuffed animal or other favorite toy which has a moving mouth and/or expressive eyes that talks to him or her in various different voices.

Another object is to provide such a system which uses a toy design to talk to children through a medium like a stuffed animal by using a two-way analog or digital radio signal.

A further object is to provide such a system using an open channel, analog or digital radio or telephone signal which allows a child and adult to hear at the same time without any delay.

The present invention possesses many advantages and features which will become more apparent to those persons skilled in this area of technology and others when reading the detailed description of some exemplary preferred embodiments of the present invention as set forth hereinbelow in conjunction with the accompanying drawings.

## **Brief Description of the Drawings**

FIG. 1 is a perspective illustration of the components of a preferred first embodiment of the present invention, and depicting how such components interact with each other.

FIG. 2 is a schematic illustration of the electronic components for the novel

interactive toy system depicted in FIG. 1.

### **Detailed Description of Some Preferred Embodiments**

With reference to the drawings, a first preferred embodiment of the invention is illustrated in FIGS. 1 and 2.

5 In accordance with this first preferred embodiment of the present invention, the novel interactive toy system 1 may include any desired toy 2, such as, for example, a stuffed animal.

The toy 2 preferably includes an open microphone 3, a transmitter 4, a transmitter antenna 5, a receiver 6, a receiver antenna 7, an amplifier 8, a speaker 9, and optionally, but not necessarily, a movable mouth 10 and/or eyes 11.

An adult or other operator 12, who may be located remotely from the toy 2, is preferably, but not necessarily, provided with a headset 13 which includes at least one earphone 14 and a microphone 15, and which is operatively connected an electronic module 16 that includes a receiver 17, a receiver antenna 18, the microphone 15, an optional voice modulator 19, a transmitter 20, and a transmitter antenna 21.

10 In essence, the toy 2 portion of the interactive toy system 1 in accordance with a first embodiment of the present invention includes two wireless radios 3-9, one 6-9 of which is substantially permanently placed on receiving mode, and the other one 3-5 of which is placed on substantially permanently placed on transmitting mode. The transmitting radio  
20 3-5 preferably, but not necessarily, is provided with an extended microphone 3 which preferably, but not necessarily, may be located in the head 22 of the stuffed toy 2. This toy/radio arrangement 2-9 is for the purpose of hearing and talking to the child.

This toy/radio arrangement 2-9 may be powered by a suitable electrical battery or

batteries. The electrical components 4-8 of this toy/radio arrangement 2-9 may preferably, but not necessarily, be disposed on a single circuit board and/or in a protective case 23. The electrical components can all be turned "ON" by a single switch or switch button.

In essence, the operator portion of the interactive toy system 1 in accordance with a first embodiment of the present invention also includes two wireless radios 14-21, one 17, 18 of which is substantially permanently placed on receiving mode, and the other one 19-21 of which is placed on substantially permanently transmitting mode. These operator radios 14-21 are operably connected to the headset 13. The transmitter 20 may preferably, but not necessarily, be patched directly into the voice modulator 19 to disguise the operator's voice to enhance the illusion of the interactive communication game with the child. This operator/radio arrangement 13-21 is for the purpose of hearing and talking to the operator 12.

This operator/radio arrangement 13-21 may be powered by a suitable electrical battery or batteries. The electrical components of this operator/radio arrangement 13-21 may preferably, but not necessarily, be disposed on a single circuit board and/or in a protective case 16. The electrical components can all be turned "ON" by a single switch or switch button.

With the exception of the headset 13, the electrical components of this operator/radio arrangement may be disposed in the protective case 16 for hooking onto a belt or garment 24 of the operator 12.

The headset 13 makes reading, singing, and/or talking by the operator 12 easier and more convenient, especially if the operator 12 wishes to do household chores or leave the vicinity of the child (i.e., leave the room) for any reason. For example, a parent

operator 12 may read a story to his or her child through the toy animal 2; and this may be done from many feet (e.g., 300 to 800 feet) away from the child. Furthermore, the child may be unaware that the parent 12 is reading the story, especially if the voice is disguised and/or modulated.

5            Optionally, the system 1 would include robotic animatronics, such as a moving mouth 10, blinking eyes 11, eyes which include a closed circuit video system for a better response to the child's actions, etc. of the toy 2, and/or a remote control to control walking, gesturing, etc. of the toy 2.

Another important use of the interactive toy system 1 according to the present invention is to have it be a part of a program used by child psychologists to help children who have been abused and/or do not trust adults. Presently, hand puppets and stuffed animals are being used when communicating with these types of children.

Another embodiment of the interactive toy system 1 according to the present invention would use cellular telephone circuitry. Transmissions and receptions would be substantially without static. The ranges would be anywhere from a quarter of a mile to anywhere in the world. For example, this would enable a parent 12 to read a story or play a communication game with his or her child through the toy 2 from a distant city.

There have been illustrated in the accompanying drawings and described hereinabove only several of the unique and novel preferred embodiments of the present invention which can be constructed in several different sizes, shapes, and arrangements

It should be understood that many changes, modifications, variations, and other uses and applications will become apparent to those persons skilled in this particular area of technology and to others after having been exposed to the present patent specification

and accompanying drawings.

Any and all such changes, modifications, variations, and other uses and applications which do not depart from the spirit and scope of the present invention are therefore covered by and embraced within the present invention and the accompanying patent

5 claims.

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